

CPC**COOPERATIVE PATENT CLASSIFICATION****A23N**

MACHINES OR APPARATUS FOR TREATING HARVESTED FRUIT, VEGETABLES OR FLOWER BULBS IN BULK, NOT OTHERWISE PROVIDED FOR; PEELING VEGETABLES OR FRUIT IN BULK; APPARATUS FOR PREPARING ANIMAL FEEDING- STUFFS (machines for cutting straw or fodder [A01F 29/00](#); disintegrating, e.g. shredding, [B02C](#); severing, e.g. cutting, splitting, slicing [B26B](#), [B26D](#))

A23N 1/00

Machines or apparatus for extracting juice (preparation of non-alcoholic beverages, e.g. by adding ingredients to fruit or vegetable juices, [A23L 2/00](#); apparatus for making beverages [A47J 31/00](#){centrifuges [B04B](#)}; extracting presses [B30B](#))

A23N 1/003

- . {especially for citrus fruits}

A23N 1/006

- . {by electropasmolysis (preserving of fruit or vegetables by electropasmolytic treatment [A23B 7/015](#))}

A23N 1/02

- . combined with disintegrating or cutting

A23N 3/00

Machines for coring or stoning fruit, characterised by their feeding device ([A23N 4/00](#) takes precedence; {kitchen devices for stoning fruit [A47J 25/00](#)})

A23N 3/02

- . with feeder-drums

A23N 3/04

- . with endless feeder-belts

A23N 3/06

- . with feeder-tables

A23N 4/00

Machines for stoning fruit or removing seed-containing sections from fruit, characterised by their stoning or removing device (for peeling fruit and removing seed-containing sections [A23N 7/08](#); domestic devices for stoning fruit [A47J 23/00](#), for coring fruit [A47J 25/00](#))

A23N 4/02

- . for stoning fruit

A23N 4/04

- .. for peaches, plums, apricots or the like

A23N 4/06

- .. for cherries or the like ([A23N 4/04](#) takes precedence)

A23N 4/08

- .. for dates, olives or the like oblong fruits

A23N 4/085

- ... {for olives}

A23N 4/10

- .. for fruit with very small pips, e.g. raisins

A23N 4/12

- . for coring fruit {(for household appliances [B26B](#))}

A23N 4/14

- .. for apples, pears or the like

A23N 4/16

- .. for tomatoes or the like

- A23N 4/18 . . . for citrus fruits
- A23N 4/20 . . . for pineapples
- A23N 4/22 . for both splitting and stoning
- A23N 4/24 . for removing seed-containing sections from cut fruit [{\(material in A23N 4/12\)}](#)
- A23N 5/00** **Machines for hulling, husking or cracking nuts** [{\(household nutcrackers A47J 43/26\)}](#)
- A23N 5/002 . {for skinning nut kernels}
- A23N 5/004 . {for palmnuts [\(A23N 5/002 and A23N 5/08 take precedence\)](#)}
- A23N 5/006 . {for chestnuts [\(A23N 5/002 and A23N 5/08 take precedence\)](#)}
- A23N 5/008 . {for almonds [\(A23N 5/002 and A23N 5/08 take precedence\)](#)}
- A23N 5/01 . for peanuts
- A23N 5/03 . for coconuts [\(A23N 5/08 takes precedence\)](#)
- A23N 5/08 . for removing fleshy or fibrous hulls of nuts [\(for peanuts A23N 5/01\)](#)
- A23N 7/00** **Peeling vegetables or fruit** [\(devices for skinning onions A23N 15/08; {peeling by non-mechanical means A23P}; peeling machines of the household type A47J 17/00\)](#)
- A23N 7/002 . {Peeling pineapples [\(A23N 7/005 and A23N 7/01 take precedence\)](#)}
- A23N 7/005 . {Peeling with steam}
- A23N 7/01 . using chemical substances, e.g.lye
- A23N 7/02 . Peeling potatoes, apples or similarly shaped vegetables or fruit [\({A23N 7/005 and}A23N 7/01 take precedence\)](#)
- A23N 7/023 . . . {one by one}
- A23N 7/026 . . . {Peeling machines therefor with rotary fruit holding spindles and fixed or movable peeler blades}
- A23N 7/04 . Peeling asparagus [\({A23N 7/005 and}A23N 7/01 take precedence\)](#)
- A23N 7/08 . for peeling fruit and removing seed-containing sections
- A23N 7/10 . Driving mechanisms
- A23N 11/00** **Removing pith from stems**
- A23N 12/00** **Machines for cleaning, blanching, drying or roasting fruits or vegetables, e.g. coffee, cocoa, nuts** [\(methods for treating, e.g. roasting, coffee or cocoa, A23F, A23G;](#)

cleaning, e.g. washing, or drying grain [B02B 1/00](#); separating solids from solids for cleaning [B07B](#); cleaning in general [B08B](#); heating devices per se, see the relevant classes, e.g. [F24](#); drying machines in general [F26B](#))

- A23N 12/005 . {for dry-cleaning}
- A23N 12/02 . for washing or blanching ([A23N 12/06](#) takes precedence; blanching methods [A23B 7/06](#))
- A23N 12/023 .. {for washing potatoes, apples or similarly shaped vegetables or fruit (washing grain [B02B 1/04](#))}
- A23N 12/026 ... {Stone-gatherers or cleaning devices for the washing machines}
- A23N 12/04 .. for blanching
- A23N 12/06 . for washing or blanching, combined with subsequent drying
- A23N 12/08 . for drying or roasting ([A23N 12/06](#) takes precedence)
- A23N 12/083 .. {with stirring, vibrating or grinding devices}
- A23N 12/086 .. {with centrifuging devices}
- A23N 12/10 .. Rotary roasters
- A23N 12/12 .. Auxiliary devices for roasting machines
- A23N 12/125 ... {Accessories or details}

- A23N 15/00** **Machines or apparatus for other treatment of fruits or vegetables for human purposes; Machines or apparatus for topping or skinning flower bulbs** {(treatment of coffee, other than drying or roasting [A23E](#); treatment of cocoa [A23G 1/02](#))}
- A23N 15/001 . {for trimming artichokes}
- A23N 15/003 . {for trimming cauliflowers, broccoli or cabbages}
- A23N 15/005 . {for pricking peas or beans}
- A23N 15/01 . for stripping Brussels` sprouts from stalks
- A23N 15/02 . for stemming, piercing, or stripping fruit {(for household appliances [A47J 21/00](#))}; Removing sprouts of potatoes
- A23N 15/025 .. {for stemming grapes}
- A23N 15/04 . Devices for topping fruit or vegetables (topping onions [A23N 15/08](#))
- A23N 15/045 .. {Devices for topping mushrooms}
- A23N 15/06 . Devices for other treatment of fruit e.g. marking, maturing, polishing
- A23N 15/08 . Devices for topping or skinning onions or flower bulbs
- A23N 15/10 . for shelling peas or beans
- A23N 15/12 . for snipping or stringing beans

- A23N 17/00** **Apparatus specially adapted for preparing animal feeding-stuffs** {(automatic devices for the distribution of liquid fodder for stock or game [A01K 5/0216](#); sucking apparatus for young stock [A01K 9/00](#))}
- [A23N 17/001](#) . {by treating with chemicals, e.g. ammoniac, sodium hydroxide (processes [A23K 1/12](#))}
- [A23N 17/002](#) . {for treating of meat, fish waste or the like}
- [A23N 17/004](#) . {for treating by application of heat, e.g. by means of potato cookers (drying [F26B](#))}
- [A23N 17/005](#) . {for shaping by moulding, extrusion, pressing, e.g. pellet-mills (processes [A23K 1/001](#); presses in general [B30B](#))}
- [A23N 17/007](#) . {for mixing feeding-stuff components}
- [A23N 17/008](#) . {for treating of silage, e.g. upgrading with water}
- [A23N 17/02](#) . Fodder mashers (household implements for mashing potatoes or other foodstuffs [A47J 19/04](#))
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- A23N 2007/00** **Peeling vegetables or fruit** (devices for skinning onions [A23N 15/08](#); {peeling by non-mechanical means [A23P](#)}; peeling machines of the household type [A47J 17/00](#))
- [A23N 2007/007](#) . Brush rollers for peeling fruit or vegetables
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- A23N 2015/00** **Machines or apparatus for other treatment of fruits or vegetables for human purposes; Machines or apparatus for topping or skinning flower bulbs** {(treatment of coffee, other than drying or roasting [A23E](#); treatment of cocoa [A23G 1/02](#))}
- [A23N 2015/006](#) . Singularising cherries or other clustered fruit and vegetables
- [A23N 2015/008](#) . Sorting of fruit and vegetables